AMENDMENT NO. 1 OCTOBER 2022

TO

IS 374 : 2019 ELECTRIC CEILING TYPE FANS — SPECIFICATION

(Fourth Revision)

(*Page* 1, *clause* **1.1**) — Insert the following note at the end:

'**3** Air circulation ceiling fans meant for air circulation having rated speed less than or equal to 250 rev/min are optional unless required by manufacturer or purchaser.'

(*Page* 2, *clause* **6.2**) — Substitute the following for the existing:

'**6.2** The preferred sizes of ceiling fans shall be 600, 750, 900, 1 050, 1 200, 1 320, 1 400 and 1 500 mm.

NOTES

1 Sizes of fans specified above are subject to a tolerance of ± 5 mm.

2 Sizes other than the preferred sizes within the range of 600 mm and 1 500 mm are allowed, provided it meets the performance values specified in Table 1.'

(*Page* 2, *clause* **10.2**) — Substitute the following for the existing:

'**10.2** The regulator shall have an 'off' position prior to the lowest speed contact, and shall be provided with not less than five running positions except in case of continuously variable speed regulators. The speed difference at any running position shall not deviate by more than ±50 percent from the ideal speed difference calculated on the basis of maximum and minimum speeds divided by the number of steps provided in the speed regulator.

NOTE — The following example illustrates the significance of this clause for a 5 speed regulator for Induction motor.
Let the maximum speed of the fan be 400 rev / min and the minimum speed be 200 rev/min.
Then the ideal speed difference will be:
$(\text{Speed}_{max} - \text{Speed}_{min})/ (\text{No. of speeds} - 1)$ that is (400 – 200)/ (5 – 1) = 200/4 = 50 rev/min
The speed difference between any two running position should be between 75 rev/min and 25 rev/min.'

(*Page* 3, *clause* **10.7**) — Substitute the following for the existing entries:

'**10.7** Electronic type regulators and remotes shall be provided with radio and television interference suppressing devices, if required, so as to ensure that there is no appreciable noise/disturbance on radio/television when operated outside a radius of 2 m from the regulator. Electronic type fan regulators shall comply with the requirement given in IS 11037. In addition, the regulator shall comply with the EMC requirements in accordance with IS 14700 (Part 3/Sec 2).'

(*Page* 4, *clause* **14.3.1**) — Substitute the following for the existing:

'**14.3.1** *Test Chamber*

The fan shall be tested in a test chamber having the following dimensions:

a) Length: 4.50 m,
b) Width: 4.50 m, and
c) Height: 3 m (*See* Fig. 1).

The material used for fabricating the test chamber shall be made of plywood with glass windows as per requirement.

The top of the test chamber shall be covered except for a centrally situated circular opening (top-opening), the diameter of which shall be between 1.1 and 1.2 times the blade sweep. The central diaphragm in which the top opening is located shall be not more than 6 mm thick.

The bottom of the test chamber shall be cut away all round to a height of 450 mm from the ground level to provide adequate outlet for the air.

An outer chamber shall be provided at a uniform distance of 1 to 1.25 m laterally around the test chamber and reaching from the ground level to a height of not less than 3 m. One or more walls of a room may be utilized as sides of the outer chamber provided they comply with all the necessary conditions.

The observer shall take readings from a position between the test chamber and outer chamber, and a small shelf for electrical instruments may be provided in this space. Except for these, the space between the chamber and the outer screen and the space inside the test chamber shall be clear of all obstructions, and there shall be no heating or cooling apparatus anywhere in the system.

The room in which the test chamber and the outer chamber are erected shall be suitably protected from extraneous draughts.'

(*Page* 5, *clause* **14.4.1**) — Substitute the following for the existing:

'The peripheral speed of the fan at test voltage and rated frequency shall be as follows:

Sl No.	*Size of Fan (mm)*	*Maximum Peripheral Speed (m/s)*
(1)	(2)	(3)
i)	≥ 600 and ≤ 750	40
ii)	> 750 and ≤ 1 400	30
iii)	> 1 400 and ≤ 1 500	20

(*Page* 5, *clause* **15.1**, *Para* 1) — Insert the following at the end:

'Before starting the tests, the fan and its attachments are adjusted in accordance with the manufacturer's instructions for normal operation. Any controls shall be set for maximum continuous air flow unless the manufacturer's instruction states otherwise. Any other accessories such as luminaires, air purifier etc, shall be turned off.'

(*Page* 6, *Table* 1) — Substitute the following for the existing:

Table 1 Performance Value of Fans

(*Clause* 15.1 and 15.2)

Sl No.	**Fan Size mm**	**Minimum Air Delivery (m^3/min)**	**Minimum Service Value (m^3/min/W)**
(1)	(2)	(3)	(4)
1	600	100	1.5
2	> 600 and ≤ 750	115	1.7
3	> 750 and ≤ 900	130	3.1
4	> 900 and ≤ 1 050	150	3.1
5	> 1 050 and ≤ 1 200	210	4.0
6	> 1 200 and ≤ 1 320	220	4.0
7	> 1 320 and ≤ 1 400	245	4.1
8	> 1 400 and ≤ 1 500	270	4.3

NOTES

1 Air delivery values are on the basis of air velocity measurement up to 15 m/min.

2 Performance values of fans as per Table 1 and other test parameters such as speed, input watt, power factor etc, shall be corresponding to the highest speed achievable from remote control or regulator. Any other devices or speed regulation features, if provided, shall be suitably set to achieve the highest speed.

(ETD 32)

Publication Unit, BIS, New Delhi, India